Reviews

HISTAMINE AND SIR HENRY DALE

Histamine. Joint symposium of the Ciba Foundation, the Physiological Society, and the British Pharmacological Society, in honour of Sir Henry Dale. Editors for the Ciba Foundation: G. E. W. Wolstenholme, O.B.E., M.A., M.B., B.Ch., and Cecilia M. O'Connor, B.Sc. (Pp. 472+xvi; illustrated. 50s.) London: J. and A. Churchill Ltd. 1956.

Histamine, or β-iminoazolylethylamine, the base obtained from the amino-acid histidine by decarboxylation, was prepared by chemical synthesis (Windaus and Vogt, *Ber. dtsch. chem. Ges.*, 1907, **40**, 3691) long before its wide biological importance was suspected. Starting with an interest in the power of certain extracts of ergot to stimulate the isolated uterus to tonic contraction, Barger and Dale (*J. Physiol.*, 1910, **40**, xxxviii) investigated the nature of the active substance in *Ergotinum dialysatum*, an ergot preparation which, as Kehrer had shown (*Arch. exp. Path. Pharmak.*, 1908, **58**, 366), could be particularly effective in this respect, although different preparations varied widely in their potency. Barger and Dale isolated histamine from their extract of ergot and showed that it was highly effective in inducing uterine contraction, while Dale and Laidlaw (*J. Physiol.*, 1910–11, **41**, 318) found that histamine caused a fall of blood pressure together with vasodilatation in carnivorous animals, although species differences were observed in this type of response. About the same time Ackermann (*Hoppe-Seyl. Z. physiol. Chem.*, 1910, **65**, 504) obtained histamine by the putrefaction of histidine, while Kutscher (*Zbl. Physiol.*, 1910, **24**, 163) independently extracted from ergot what was probably an impure preparation of the same base, describing it as an intensely toxic substance which differed in some physiological actions from the β-iminoazolylethylamine prepared by Ackermann. Barger and Dale (loc. cit.) stated, with respect to their ergot preparation, "It occurred to us that the growth of micro-organisms during dialysis might account for the high degree of activity of the dialysed preparation. This supposition was confirmed by experiment. We further found that a like activity was possessed by commercial extracts of meat and of yeast, so that . . . the active principle . . . was a substance not peculiar to ergot, and produced by putrefaction as well as by ergot fungus."

From such beginnings knowledge of the physiological significance of histamine grew slowly. Barger and Dale (*J. Physiol.*, 1910–11, **41**, 499) isolated histamine from intestinal mucosa, but with the advent of the first world war it was not until 1919 that Dale and Richards (ibid., 1918–19, **52**, 110) published their classical paper on histamine dilatation. In this they consider the possibility that substances with histamine-like action are produced by activity or by injury of the tissues. In the same volume of the *Journal of Physiology* (1918–19, **52**, 355) Dale and Laidlaw, writing on histamine shock, pointed out the similarity between the effects of the injection of histamine into animals and anaphylactic reactions. Since those days the growth of interest in, and the number of publications on, histamine and its actions are both tremendous.

It was a happy thought when, in the spring of 1955, the Physiological Society and the British Pharmacological Society called together a conference on the subject of histamine. At the same time the Ciba Foundation decided to arrange a symposium in its series, which was named in honour of Sir Henry Dale. The proceedings of the two meetings are included in the volume under review, and illustrate the very wide interest in histamine which now exists. The topics discussed by the members of the two distinguished international gatherings included the distribution of histamine in tissues and within cells, histamine releasers, the mechanism of histamine release, antihistamine substances, and the origin and fate of histamine in the body. The discussion which followed each communication is recorded, and indeed the record of discussion takes up a large part of the volume.

The book bears witness to the fecundity of Sir Henry Dale's early observations, to the assiduousness and originality of those who now carry out research in an interesting and important field, to the significance of histamine in nature, and to the inspiration of those who arranged and recorded the various meetings. In the preface the statement is made that research on histamine is at a point at which important advances can be expected. For those who wish to prepare themselves for still further publications in an ever-growing subject this volume is confidently recommended.

F. G. YOUNG.

BIOLOGICAL EFFECTS OF RADIATION

Proceedings of the International Conference on the Peaceful Uses of Atomic Energy. Vol. XI: *Biological Effects of Radiation.* (Pp. 402; illustrated. $8; 57s.; 34 Sw. fr.) London: H.M. Stationery Office. 1956.

When we went to school we were given anthologies of verse and prose. Study of these was supposed to give us a review of the styles and to a less extent the modes of thought of great writers. Now that we are grown up we find books being published recording the papers presented at conferences. Literary style in scientific papers is good, bad, and indifferent (seldom good). The object of publishers therefore, apart from profit, must be to make readily available to us the thoughts and deeds of the great in specific scientific disciplines.

This particular volume records some of the papers—about half of those of medical and biological interest—from one of the most memorable scientific conferences of all time. The importance of the Geneva meeting in August, 1955, was that it brought East and West together after years of scientific as well as ideological divorce. It led to declassification of much in science and technology relating to nuclear energy that formerly was secret. In the biological field, however, there had been little or nothing classified, so in this field there was no spate of revelations as, for instance, in reactor-engineering. Instead we have the leading doctors of medicine and science of the various countries philosophizing on how ionizing exerts its biological effects or reporting what they considered their most significant but not necessarily latest research. The papers are grouped—as were the sessions—into biological effects of radiation; modes of radiation injury; carcinogenesis and metabolism of bone-seeking isotopes; effects on reproductive system and on foetus; mechanisms of radiation injury; protection and recovery; genetic effects—human implications.

J. F. LOUTIT.

GREAT NEUROLOGISTS

Grosse Nervenärzte. Edited by Kurt Kolle. (Pp. 284+vii; illustrated. D.M. 29.40.) Stuttgart: Georg Thieme. 1956.

To medical historians with a facility in German this collection of short biographies will prove valuable as well as interesting. Professor Kolle, of the Ludwigs-Maximilian University of Munich, has edited a beautifully printed and illustrated volume written by a team of distinguished medical authors. An account is given of the careers of some 21 neurologists. This term is employed in the widest possible sense, for included are such psychiatrists as Freud, Jung, Bleuler, Kraepelin, and Wagner von Jauregg, among others; Cushing and Foerster among neurosurgeons; and Pavlov, Berger, and Sherrington among physiologists. The emphasis has fallen, naturally enough, upon the German-speaking neurologists. Great Britain is represented by two names only, including of course Hughlings Jackson, whose biographical essay has been contributed by Sir Gordon Holmes. France is represented by Charcot and Pinel. America's sole figure is Cushing, written up by Professor Fulton. Portraits are reproduced in almost every case, and there are a particularly charming photograph of Otfrid Foerster and a striking likeness of Konrad Rieger. An unusual but very useful appendix lists the various holders of the chairs in neurology and psychiatry at most of the German, Austrian, and Swiss universities.

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